

OPEN HOUSE AND INFORMATIONAL WORKSHOP

"THE BIG STRAW"

(Colorado Aqueduct Return Project)

DECEMBER 10, 2002

City Hall, City of Grand Junction, Colorado

MEETING FORMAT

- 1) This workshop is intended to provide information on the Big Straw Project. It is not intended to be a debate. The intent is to collect scoping questions and to gather information on existing interests and concerns that may be used in future studies.
- 2) It is organized as a question and answer session with open houses before and after the formal question and answer period. The open houses will allow the audience to interact with the panel participants on a one on one basis, and to review the posters with issues of the various organizations listed.
- 3) Minutes for the workshop will be available on the Colorado River Water Conservation District website at www.crwcd.gov.
- 4) Additional questions that may not have been addressed during the workshop may be submitted to the Gunnison Basin/Grand Valley Water Forum to relay to panel participants. The responses will be posted with the minutes on the website.

GROUND RULES

Your cooperation with the following ground rules will be greatly appreciated and will help create an organized and informational event.

- 1) This workshop is intended for informational purposes only, and is not intended to be a debate.
- 2) Participants will be limited to one question to ask at a time. If you have another question, please wait until others have had a chance to ask their question.
- 3) Please respect others' opinions/comments. Remember, this is not a debate.
- 4) Questions must be directed into the microphones provided, so that they may be recorded, and heard by all in attendance.

GUNNISON BASIN - GRAND VALLEY WATER FORUM

Sponsor

DAN BELEY, MODERATOR

CDPHE

PANELISTS

REEVES BROWN

CLUB 20

BUTCH CLARK

GREG GNESIOS

B. L. M.

GREG HOSKIN

Colorado Water Conservation Board

NIC KORTE

Grand Valley Audubon Society

ERIC KUHN

Colorado River Water Conservation District

PAT MULHERN

Mulhern MRE, Inc.

AL PFISTER

U.S. Fish & Wildlife Service

MATT SURA

Western Colorado Congress

HARRY C. TALBOT

Agriculture

JOHN TRAMMEL

Trout Unlimited

Reeves Brown

President, Club 20

1. Cost: Is there market enough to pay for the project?
 2. Water Quality: Any waters pumped upstream must not degrade the water quality of the existing stream flows when and if those waters re-enter the stream at a higher elevation.
 3. Storage: Where will these pumped waters be stored at the end of the pipeline? Do we need to construct new storage facilities? If we use existing storage facilities, then we must ensure that the quality of the current storage is not reduced by the addition of the pumped water.
 4. Endangered species impacts: We must be aware of potential impacts on endangered fish species within the Colorado River and avoid or mitigate those impacts as necessary.
 5. Recognition of existing water rights: Any water pumped out of the river must not impair existing senior Colorado water rights further downstream.
 5. Adequate water flows must be maintained in the Colorado River to meet existing Compact requirements with downstream states.
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Eric Kuhn

Colorado River Water Conservation District

1. There are four major river systems within the State of Colorado: the Platte, Arkansas, Rio Grande and Colorado.
2. Of those four river systems, the Arkansas and Rio Grande are over appropriated, water is available on the Platte River in wet years only. The Colorado River has approximately 500,000 a.f. available for future consumptive use within Colorado.
3. A number of Colorado River tributaries cross into adjacent states: the San Juan, Piedra, Animas, La Plata, Mancos, Dolores, Little Dolores, Colorado (mainstem), White, Green (Yampa) and Little Snake.
4. Of these streams, the Colorado (mainstem) is by far the largest. Its average annual flow is more than all of the other streams combined.

5. 500,000 to 600,000 a.f. of Colorado River water is diverted annually out of the headwaters of the Colorado River into the Platte and Arkansas River Basins. All of this water is diverted out of the mainstem of the Colorado River above Glenwood Springs.
6. The easy to build transmountain diversions were built a long time ago. Except for wet-year water, the Colorado River above Glenwood Springs is fully appropriated.
7. Front Range demands for additional municipal water will continue to grow, putting great pressure on the Western Slope for additional water.
8. Water is available for appropriation on the Colorado River below Grand Junction.
9. Moving water from below Grand Junction to the Front Range allows the West Slope to use that water first. It does not impact recreation or water quality.
10. The Colorado River Water Conservation District is supporting a study of the Big Straw Project. A study is needed to evaluate the project costs, benefits and environmental impacts.

The River District Board has not made any decision on the actual project.

Gigi Richard, Ph.D.
Assistant Professor of Geology
Department of Physical and Environmental
Sciences
Mesa State College

1. Downstream impacts on the Colorado River. The Colorado River already suffers from depleted flows (Pitlick & Van Steeter, 1998).
2. Creation of need for more upstream storage projects.
3. Collection of sediment in constructed wetlands – both quantity and quality. Removal and disposal of sediment will be necessary.
4. Environmental impacts of 500 acres of constructed wetlands in arid region. Evaporation/transpiration losses, nonnative vegetation, necessity to line wetlands to prevent infiltration losses.

Last resort proposal. Conservation options should be exhausted before consideration of CARP. Conservation options abound and include but are not limited to: reduction in watering of lawns, golf courses and cemeteries, improved irrigation practices, and recycling of gray water.

Greg Hoskin

Colorado Water Conservation Board

1. Reason for the Study
 - a. The current drought
 - b. Growth along the Front Range
 - c. Availability of water on the west slope
 - d. Importance of utilizing the State's compact entitlement.
 2. Alternatives to the construction of the CRRP to allow Colorado to develop its Colorado River Compact entitlements.
 3. Alternatives to provide increased water supplies to the east slope including, but not limited to construction of other water development projects, agricultural transfers, water conservation, growth limitations, and other demand management practices.
 4. The strategies will include measures taken on a local, regional or state-wide basis such as revised institutional arrangements, statutory revisions, policy changes, and new funding methods.
 5. Review studies, reports or other available data.
 6. Compile Water Demand Studies on the Arkansas, South Platte and Colorado River System.
 7. Prepare an overview of the Colorado main stem physical environment.
 8. Describe the institutional setting for water use and development in Colorado.
 9. Formulate a number of project configurations to address the three water supply and demand scenarios.
 10. Non-structural elements will include water rights transfers, substitutions, water leasing, revised operations of existing systems, and reduce demands.
 11. Structural elements will include use of aquifers, new storage and enlargements of existing storage reservoirs.
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Gregory Gnesios

Bureau of Land Management

1. From Loma, Colorado to the Utah border, the Colorado River runs through the Colorado Canyons National Conservation Area, a nationally significant unit of the Bureau of Land Management.
2. The Black Ridge Canyon Wilderness is a congressionally designated wilderness area and comprises most of the area north of the Colorado River between Loma and the Utah border and is managed in accordance with the Wilderness Act of 1964.
3. A right-of-way would be required by the Bureau of Land Management if this proposal traverses any BLM lands.
4. There may be significant impacts to riparian systems along the river corridor within the National Conservation Area (NCA).
5. Fluctuation in river flows could adversely affect river rafting and other boating activities within the NCA.
6. An Environmental Impact Statement (EIS) would likely be required if this proposal were to traverse BLM lands, as well as major mitigation measures.
7. There are numerous cultural sites that could be affected by construction.
8. How would the proposal affect wildlife habitat and Threatened and Endangered Species within the NCA?
9. Would the proposal encourage the spread of invasive plant species into the NCA?
10. Would the proposal affect important paleontological resources within the NCA?
11. What would the project's effects be on the natural view shed?

Harry Talbott

Agriculture

1. When the big straw has been studied it will become obvious that there are scientific and political obstacles which cannot be overcome. It will then

become obvious to most that it will be better to work with nature than against it to increase usable water supplies.

2. Approximately 81 percent of the precipitation that falls on Colorado returns to the atmosphere.
3. The water held in the rocks and soils of the state comprises by far the largest reservoir of potentially available water.
4. This potential source of water is only partially understood and only a small percent is being used.
5. Watershed yield can be greatly enhanced by proper vegetation management.
6. Watersheds can be managed for maximum groundwater and aquifer recharge.

Studies indicate that streamside control of certain water guzzling plants can make large quantities of water available.

John Trammel

Trout Unlimited

Trout Unlimited's mission: To conserve, protect, and restore the cold-water fisheries of North America and their watersheds. Protecting a watershed usually includes opposing out-of-basin transfers of water. However, CARP is an imaginative proposal which Colorado Trout Unlimited is not prepared to oppose without learning more about it. Currently, we raise these questions and concerns.

1. What effects would there be from removing large quantities of water from occupied habitat for endangered species on the Colorado River - and how would permits ever be secured in light of ESA issues?
2. It seems likely that additional reservoirs would be required. What would be their locations, and what would be their environmental and economic costs?
3. What would be the effects on wildlife of transferring warm water into cold-water environments?
4. CARP proposes to remove Se and other contaminants by means of a constructed giant wetland. Will it be effective in providing water quality at a level at least equal to that of the receiving waters? How much time would be required before it could begin to deliver clean water to the pipeline? How long would its lifetime be? What would be the losses

caused by evaporation, transpiration, and losses to the surrounding sediments and rock? If this technique doesn't work, what would be the cost of conventional treatment?

5. What kind of firm yield could CARP provide under the Colorado River Compact? How sure are we that 280,000 A-F will be available? Colorado doesn't get a guaranteed quantity of water under the Compact, but rather a proportion of the river's yield. What would happen to CARP users and other users on the Western Slope should there be a "Compact call" requiring Colorado to deliver water to the downstream states?
6. If CARP took all of Colorado's remaining entitlement, what would be the effect on other Colorado water users in the future?
7. What would be the environmental costs of the construction of the pipeline and infrastructure?
8. Are there really no environmental and economic obstacles to the pipeline if it follows rivers and highways? Glenwood Canyon comes to mind.
9. What would be the unintended adverse consequences? (Answer: We don't know yet.)

Given the likely enormous costs, environmental effects, and water-quality challenges that the project faces, why should Coloradoans spend \$500,000 studying this project at a time of major budget difficulties for the state?

Matt Sura,

Director of Western Colorado Congress

Is The Big Straw Study Opening A Pandora's Box?

While studying the Big Straw it is certain that the tremendous cost of the project will be seen as prohibitive. As the Colorado Water Conservation Board looks at alternatives that will 1) use our Colorado River Compact water entitlement and 2) bring additional water to the Front Range, it has already admitted it will consider a SHORTER STRAW. An idea that would be much less expensive is building a straw that would only go to DeBeque Canyon or the Shoshone Power Plant so the water would recycle through the Grand Valley— satisfying our water rights and leaving the better quality water in Green Mountain/ Dillon Reservoir for use on the Front Range.

This solution would satisfy the two requirements of the study as well as saving billions of dollars— but what about the interests of the Western Slope? The water in the Grand Valley is already quite high in salt, selenium, and silt. What would our water quality be like after it is recycled through the Grand Valley a few times?

The Big Straw is being sold to the Western Slope as a boon to our economy and benign to our water interests. Residents of the Western Slope should be very suspicious of this present from the Colorado Water Conservation Board.

The Big Straw Has Fatal Flaws

As Mike Serlet, chief of supply planning and finance for the Colorado Water Conservation Board said of the Big Straw and other new, large transbasin projects, "There is a reason these projects haven't been built. It's because they are dogs."

- The cost of the Big Straw has been estimated at \$5 BILLION. The cost of the pumping the water 200 miles and over 4,500 feet in elevation has been estimated at \$168 million EACH YEAR. Isn't this a fatal flaw for this project? Why is the study needed?
- The original Big Straw proposal would take poor quality water and send it to the Front Range. Where would it go? Who would want it?
- The Colorado River water near the state line is already being used for endangered fish flows. How would that issue be resolved?
- Where would the storage be located (both at the beginning of the straw and at the end?)
- How will this proposal affect the new Colorado Canyons National Conservation Area?
- Economic analysis should consider the potential economic cost of removing a large amount of water from Westwater Canyon – a premier whitewater experience that brings thousands of tourists through Grand Junction annually.
- What else could be accomplished with the \$500,000 the Big Straw study is estimated to cost?

Let's Plan Before We Build

Colorado must plan for our future water needs. The legislature must require enforceable growth plans for cities and counties that allow development only when and where there are sustainable water resources available to support it. We must also commit to basin level planning that considers current and future needs, how water *within the basin* can meet those needs, and how efficiency and conservation can be implemented to meet shortages. Until that planning is done, the Front Range has no business asking the Western Slope to solve their water shortages.

Nic Korte

Grand Valley Audubon Society

1. **In a survey performed for the GJ City Council, nearly 3/4 of responders felt it important that the small town character be retained. 30% said that an “ideal” Grand Junction in 15-20 years would be “like it is now” or that growth be “stopped or controlled.” (Grand Junction, Nov. 2002 newsletter). Obviously the majority of city residents oppose the impact of a multi-billion dollar construction project.**
2. **Conservation measures will lower per capita consumption (lower water bills), increase agricultural yields, and reduce yard maintenance.**
 - Las Vegas reported that xeriscaping reduced water use by 80 %. (U.S. Water News, March 2002)
 - The West Basin Municipal Water District in Southern California (41 communities) is cutting water use by 50% using incentives (toilet and showerhead retrofitting), water recycling and education. Savings of 1.5 billion gallons per year are planned. (U.S. Water News, April 2001)
 - Studies in India, Israel, Jordan, Spain and the U.S. have shown that drip irrigation for agriculture reduces water use by 30-70% and increases crop yields 20-90%. (U.S. Water News, Sept. 2001). (In CA, sweet corn yields increased 65%.)
 - Home water-harvesting reduces outside watering.
3. **Conservation measures will avoid increasing the burden on the federal budget (all taxpayers) for existing downstream environmental restoration programs.**
 - Colorado River Delta (U.S. Water News, Feb. 1999)
 - Treaty with Mexico that establishes both quantity and quality of CO River water (desalinization costs)
 - Salton Sea-Congress ordered DOI to restore the sea but possible fixes could cost “billions of dollars.” (Science, April 1999)
 - Loss of freshwater and riparian species. (ESA costs were ~ 40 million/per year in 1997, Conservation Biology, Dec. 1998)

Nic Korte is a geochemist and private consultant with 25 years experience working with water contamination, water supply and surface water restoration. He is Conservation Chairman of Grand Valley Audubon Society and a member of the Western Colorado Congress.

Pat Mulhern

Mulhern MRE, Inc

1. Is there an Economically Viable Project?
 - Capital Costs
 - Mitigation Costs
 - Operating Costs
2. What are the Environmental Risks?
 - Downstream Depletions
 - Large Reservoir Impacts
 - Pipeline/Conveyance Impacts
3. What are the Risks of Yield?
 - Compact Issues
 - Environmental Mitigation
 - Evaporation
 - Climate
 - Transportation Losses
4. Can the Project Garner Widespread Support?
 - Environmental Groups
 - West Slope Interests
 - East Slope Interests
 - Agriculture
5. Who is the Developer/Operator?

How is the Project Funded?

Al Pfister

U.S. Fish and Wildlife Service

6. Potential threatened (T), endangered (E), or candidate species (C): bald eagle (T), Colorado pikeminnow (E), razorback sucker (E), humpback chub (E), bonytail (E), Canada lynx (T), boreal toad (C), yellow-billed cuckoo (C), Uinta Basin hookless cactus (T), DeBeque phacelia (C).
7. Potential species of concern: white-tailed prairie dogs, Colorado River cutthroat trout, Harrington beardtongue, DeBeque milkvetch, clay blazing

star.

8. Wetlands and other waters (ponds, streams, rivers, etc.), riparian areas.
9. Potential impacts to migratory birds from associated powerlines and other above ground facilities.
10. Critical habitat for Colorado pikeminnow and razorback sucker extends from Rifle, Colorado to Lake Powell, Utah. In that reach, 150 miles of critical habitat are in Utah, including important nursery areas for young Colorado pikeminnow.
11. Critical habitat for humpback chub and bonytail occurs in Black Rocks in Ruby Canyon, Colorado and Westwater Canyon, Utah. Two of the largest populations of humpback chub occur in these river reaches.
12. The timing of the water withdrawal may alter fish and riparian habitat. Riparian habitat supports numerous species, including the southwestern willow flycatcher (E).
13. If the intake facilities involve a diversion structure, up and downstream fish movement could be blocked.
14. Fish could enter the intake facilities and be permanently removed from the river.
15. Selenium levels at the state line exceed the current state standard (4.6 µg/l) 85 % of the time.
16. Constructed wetlands may help remove selenium from the water, but the wetlands themselves could become a hazard to fish and wildlife.
17. Poor water quality could affect numerous fish and wildlife species in rivers and streams where the water is delivered.

Contact: Al Pfister, Assistant Colorado Field Supervisor, (970) 243-2778

Butch Clark

Some Questions and Concerns about CARP (the Big Straw)

1. Is CARP or the Big Straw still considered a last resort?
2. What are cheaper options for water - from within Colorado?; - from outside Colorado?
3. How much water would cheaper options make available and when?

4. Can any such large project be financed in advance by those expected to benefit?
5. What happens if CARP is built and a cheaper source of water then becomes available?
6. Who will then pay off the debt and costs for maintaining the CARP project?
7. Should CARP be a state project or should a private company take on the risks?
8. Can CARP make reallocation of water easier in Colorado and how?
9. Can speculation and "games" over control of water be avoided?
10. Could CARP support water banking and how?
11. Can CARP be financed with a direct tax upon water rights?
12. Water was sent downstream from places like South Park; what lessons can be learned?
13. How would CARP promote watershed planning inclusive of all interests?
14. How would operation of CARP provide more than "minimum" stream flows?
15. What economic values associated with provision of natural services should be recognized?